

# STEM Education

## 2017 - 2018 Seminar Series

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**Dr. Suzanne Brahmia**

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### Friday, November 17

*11 a.m. seminar*

*12:30 p.m. lunch*

#### **Location:**

Sloane Physics Lab,  
SPL 56, followed by SPL 38  
217 Prospect Street,  
New Haven, CT 06511

### **Developing mathematical creativity:**

#### **Physics Invention Tasks:**

Join us for Dr. Brahmia's seminar about Physics Invention Tasks (PITs). PITs engage students in quantification, the process of mathematically generating quantities central to modeling in physics. The design of PITs is informed by the work of Dan Schwartz at Stanford, *Inventing with Contrasting Cases*, an instructional approach shown to foster generativity. In this seminar, Dr. Brahmia will describe the theoretical foundation of PITs, and their structure and implementation. She will share preliminary observations of the impact of PITs in a calculus-based introductory mechanics course and discuss the implications for physics instruction at all levels and at different institutions.

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